

NEW LAND SHELLS.

BY E. G. VANATTA.

Odontosagda havanensis new species. Pl. VI, figs. 1, 2, 3.

Shell small, thin, opaque, pinkish grey; apex obtuse, rather large, and smooth; spire depressed conic, composed of four and one half slowly increasing, vertically striate whorls; suture moderately deep; last whorl obtusely angular above the periphery, not descending in front; base obtusely conic, with a wide, perspective, well-like umbilicus. The surface of the base is provided with irregular incremental striae, and under a strong lens showing spaced spiral striae. Aperture lunate; peristome sharp, evenly arcuate, within the lip provided with one large white tooth in the basal region below the periphery, and a smaller white tooth near the base of the narrow columella.

Alt. .77, diam. 1.25, alt. of aperture .42, diam. .51 mm.

Picked from red earth collected under bushes in front of the Country Club at Havana, Cuba, by Louis H. Bregy in March, 1920.

The type is tray number 46,077 in the collection of The Academy of Natural Sciences of Philadelphia.

This species is smaller than *Odontosagda hillei* (Gundl.); *O. abboiti* Van. is larger and less angular near the periphery; and *O. blandi* (Weinl.) is more elevated.

This new *Odontosagda* was associated with *Praticolella griseola* (Pfr.), which has not been reported from Cuba before; also *Volvidens trichostoma* (Pfr.), *Urocoptis poeyana* (Orb.), *Guppya gundlachi* (Pfr.), *Caeciloides gundiachi* (Pfr.), and *Ennea bicolor* Hutton.

Zonitoides bregyi new species. Pl. VI, figs. 6, 7, 8.

Shell small, thin, translucent, corneous, shining, apex smooth, rather acute; spire low-conic; suture moderately deep; whorls about four, sculptured with irregular incremental striae, and under a strong lens showing fine undulated spiral lines; periphery evenly arcuate; base convex, provided with a deep umbilicus, surface shining, showing a few growth lines, and under a strong lens fine undulated spirals

may be seen; aperture semilunate; peristome thin; columella slightly reflexed; parietal wall thin.

Alt. 1.3, diam. 1.88, alt. of aperture .75, diam. .88 mm.

Picked from leafmould collected at the Costa Mine, about 15 miles from Bueicito, Prov. Oriente, Cuba, by Louis H. Bregy in March, 1920.

The type is in the cabinet of The Academy of Natural Sciences of Philadelphia, being tray number 46,089.

This species has narrower whorls and smaller umbilicus than *Zonitoides maya* Pils.; *Z. paraensis* Bkr. is smaller; and *Striatura neomexicana* Pils. has a wider umbilicus, fewer whorls, is more depressed, and has a duller surface.

Caecilioides domingensis new species. Pl. VI, fig. 15.

Shell small, subcylindrical, translucent corneous; apex obtuse; spire high, composed of four and one half moderately convex whorls; suture rather deep; surface shining, sculptured with a few irregular incremental striae; base convex, imperforate; aperture about one-third the altitude of the shell, oval, narrow above and broader below; lip acute, slightly arcuate; basal lip convex; columella truncate, comparatively thick, concave; parietal wall nearly straight; parietal callus thin.

Alt. 2.27, diam. .79, alt. of aperture .75, diam. .54 mm.

The types are tray number 44,654 in the Academy's collection, and were picked from earth collected by Dr. W. L. Abbott, one mile northwest of Sanchez, Santo Domingo.

This species has a deeper suture, more convex whorls, and a more obtuse apex than *Caecilioides consobrina* Orb.

Opisthosiphon maynardi new species. Pl. VI, figs. 9, 10, 11, 13.

Shell conical, thin, opaque, reddish brown above and greyish-yellow below, and a white line composed of sharp points at the suture; apex truncate, widely perforate, provided with a bluish plug of shell matter in the end of the decollated whorl; spire high, conic, composed of nearly four convex whorls; suture deep, acutely dentate; the last whorl free from the penultimate whorl near the aperture and again united to it by the parietal callus; last whorl evenly arcuate, provided with two slightly thickened, white, spiral lines near, and four others visible within, the umbilicus. The surface of the shell has a dull silk-like sculpture, and many very indistinct vertical costae, about sixty on the penultimate whorl; body whorl nearly smooth near the aperture; aperture entire, wide, ellip-

tical, with a raised, smooth rim in advance of the broadly expanded, flat, white lip, which is provided with several, slightly raised, concentric lamellae; outer lip forming at the suture a recurved hollow tube connecting the deep suture openly with the interior of the aperture by a small round pore. The broadly expanded basal and columellar lips showing faint white thickenings at the ends of the above-mentioned spirals; parietal lips expanded into a broad flat plate with its edge attached to the body-whorl, the concentric lamellae upon its surface are interrupted in an oblique line above the pore in the aperture, forming a small bay in the upper edge near the outer lip. Operculum, thick, calcareous, paucispiral, smooth within, composed of about three rapidly increasing volutions; nucleus below the middle; outer surface with a deep spiral groove with a raised irregular edge arising near the nucleus, continuing along the suture and completely around the outer edge of the operculum; the surface is also covered with coarse raised lamellae in the direction of the lines of growth.

Alt. 11.2, diam. 6.3, alt. of aperture 5.0, diam. 4.4 mm.

The types are in the cabinet of the Academy, being tray number 44,488, collected at Nassau, New Providence, Bahama Islands, by Mr. C. J. Maynard in 1888.

One specimen has the apex almost entire and is composed of about seven whorls; another (fig. 11) which is not quite mature, has a broad open bay at the upper angle of the aperture disconnecting the parietal wall and outer lips, and lacks the raised rim about the inner edge of the mouth; some specimens are uniform greyish yellow.

This species differs from *Opisthosiphon bahamensis* (Shutt.) by being smoother, having weaker, more spaced vertical costae, finer crenulations at the suture, and a wider expanded lip; *O. moreletiana* (Pet.) has stronger costae, and the aperture is free from the body whorl; *O. excurrens* (Gundl.) is more strongly costate, obese and cylindrical.

Helicina abbotti new species. Pl. VI, figs. 12, 14.

Shell small, globose, moderately thick, opaque yellowish corneous; apex obtuse; spire elevated, conic, composed of four arcuate whorls; suture moderately impressed, not descending at the aperture; periphery convex; surface smooth, shining, with a few oblique lines and incremental striae crossed by very indistinct spiral lines visible under a lens. The base is rather flat, carinate about the edge of

the deep umbilical rimation; aperture subtriangular; outer lip slightly thickened, narrowly reflexed, descending in a nearly straight line to the convex periphery; basal lip sinuous, narrowly reflexed; columella thick, concave at the edge of the umbilical rimation; parietal callus broad, heavy, linguiform, and granulate; operculum not found.

Alt. 2.1, diam. 2.8, alt. of aperture 1.1, diam. 1.4 mm.

The types are in the collection of the Academy, being tray number 44,370, and were picked from earth collected one mile northwest of Sanchez, Santo Domingo, Hayti Island, by Dr. W. L. Abbott, during February, 1919.

This species differs from *Helicina (Artecallosa) continua* (Gundl.) Poey by having broader parietal callus, smaller umbilical rimation, a more sinuous basal lip, a broader columella, a more obtuse spire, and is smaller and more globose.

Stoastoma domingensis n. sp. Pl. VI, figs. 4, 5.

Shell small, conic, thin, opaque, greyish white; apex rather obtuse, smooth; spire high, conic, slightly concave sided, composed of five and one half convex whorls; body whorl contracted and free near the aperture; suture impressed, descending in front; periphery evenly convex; base convex; umbilicus minute. The surface of the shell is sculptured fine spiral hair lines, of which nine are visible on the penultimate whorl, about nineteen on the body whorl, and sixteen on the base, the growth lines are very indistinct; last whorl provided with a smooth band near the aperture; aperture semi-lunate; peristome continuous; outer lip evenly arcuate; basal lip acute; columella arcuate, slightly thickened; parietal wall nearly straight, rather thick, free from the penultimate whorl.

Alt. 2.47, diam. 2.26, alt. of aperture .89, diam. 1.04 mm.

The type is in the collection of the Academy, being tray number 44,372, picked from soil collected by Dr. W. L. Abbott, one mile northwest of Sanchez, Santo Domingo, Hayti Island.

This species is larger and more conic than *Stoastoma (Lindsleya) leanum* Ad., which it resembles in the shape of the aperture and sculpture.